

#### The CIRM Center of Excellence in Stem Cell Genomics (CESCG)

CIRM's goal in establishing the CESCG is to apply genomics and bioinformatics approaches to stem cell research to accelerate fundamental understanding of human biology and disease mechanisms, enhance cell and tissue production and advance personalized cellular therapeutics.

The CESCG is composed of Operational Cores at <u>Stanford University</u> and at the <u>Salk Institute</u> and a Data Coordination and Management Core at the <u>University of California Santa Cruz</u>, which currently support the following research programs:

- 1) Center-initiated Projects: Two projects are applying advanced genomics approaches, one to explore cardiac disease and drug toxicity and the other to investigate cell fate and identity. A third project is developing innovative bioinformatics tools to establish molecular network models and to guide predictions of cell fate.
- 2) Collaborative Research Program: Through the solicitation and participation in collaborative research projects, the CESCG provides stem cell scientists throughout the state of California with access to cutting-edge genomics and bioinformatics technologies, and expertise and assistance in experimental design and data analysis.

#### Components of CIRM's Genomics Initiative:

## Leadership

Michael Snyder, Stanford University Joseph Ecker, Salk Institute

## Center-Initiated Projects

### Cardiovascular Disease

Establishing a biobank of cardiovascular disease iPSCs

#### Cell Differentiation

Creating an atlas of single cell types from brain and pancreas

#### Molecular Networks

Bioinformatics tools for network modeling in stem cells and predicting cell fate

## Josh Stuart, UC Santa Cruz

# Data Coordination and Management

Creating a resource of sequencing data across all CESCG projects under standardized metadata and analysis, along with new tools for combining genomic datasets to increase understanding of biology and disease

## Collaborative Research Program

Link CESCG genomics & bioinformatics resources with California stem cell research

14 laboratories supported through 2 funding calls



**CIRM CESCG Institutions** 

















 $\textbf{Source URL:} \ https://www.cirm.ca.gov/researchers/genomics-initiative/about$